# SOCI 33003: SOCIAL STATISTICS

# Summer I 2025

# Homework 5

(Due on June 25 (Wednesday), 2025 @ 12:00 pm)

**NAME:**

**STUDENT ID:**

**Question 1 (20 pts)**

For the following set of raw data, please compute its mode, median, mean, variance, and st.d.

12, 32, 1, 35, 89, 68, 23, 55, 6, 1, 23, 23, 23, 44, 50

**Question 2 (20 pts)**

For the following frequency table data, please compute its mode, median, mean, variance, and st.d.

|  |  |  |
| --- | --- | --- |
| age | frequency | Cumulative frequency |
| 2 | 103 |  |
| 12 | 26 |  |
| 21 | 17 |  |
| 29 | 89 |  |
| 33 | 34 |  |
| 55 | 55 |  |
| N |  |  |

**Question 3 (20 pts)**

For the following two city data in terms of their racial compositions, please compute their respective IQV

|  |  |  |
| --- | --- | --- |
| race | City A (%) | City B (%) |
| White | 40 | 70 |
| Black  | 10 | 5 |
| Asian  | 15 | 5 |
| Hispanics | 25 | 10 |
| Others | 10 | 10 |
| IQV |  |  |

**Question 4 (20 pts)**

For the following crosstab between race and presidential vote, please compute and interpret the lambda ($λ$)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | white | black | others | RM |
| Joe Biden | 563 | 52 | 69 |  |
| Donald Trump | 794 | 25 | 71 |  |

**Question 5 (20 pts)**

For the following crosstab between education and financial situation, please compute and interpret its gamma ($G$)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | <HS | HS | College |  |
| Better | 67 | 46 | 58 |  |
| Worse  | 83 | 37 | 13 |  |